

January 2, 2002

Chris Chocola  
CTB, Inc.  
SR 15 North and Syracuse Road  
Milford, IN 45642

Re: Registered Construction and Operation Status,  
**R 085-4656-00054**

Dear Mr. Chocola:

The applications from CTB, Inc., received on June 21, 1995 and October 4, 1995, have been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5 it has been determined that the following animal feeding systems, PVC products and galvanized storage silo manufacturing source, located at SR 15 North and Syracuse Road, Milford, Indiana, is classified as registered:

#### **Source Definition**

This animal feeding systems, PVC products and galvanized storage silo manufacturing company consists of two (2) plants:

- (a) CTB, Inc. Chore-Time Equipment, is located at SR 15 North, Milford, IN 45642; and
- (b) CTB, Inc. Brock Manufacturing Plant is located at SR 15 North, Milford, IN 45642.

Since the two (2) plants are located on contiguous properties, have the same SIC codes and are owned by one (1) company, they will be considered one (1) source.

#### **Chore-Time Equipment**

- (a) Three (3) fan cage spot welding booths, known as spot welder #1, #2 and #3, installed in 1941 - 1972, exhausted through Stack W-1, capacity 14 welds on 125 miscellaneous parts per hour.
- (b) Eight (8) miscellaneous galvanized parts spot welding booths, known as spot welder #1 - #8, installed in 1941 - 1979, exhausted through Stack W-2.
- (c) Four (4) miscellaneous parts metal inert gas welding booths, known as weld area #1 - #4, installed in 1961 - 1995, exhausted through Stacks W-3 and W-4, capacity: 2.8 pounds of wire per hour total.
- (d) One (1) maintenance repair area, exhausted through Stack W-5.
- (e) One (1) prototype engineering welding station, exhausted through Stack W-6.
- (f) Two (2) lab exhaust fans, exhausted through Stacks W-7 and W-8, respectively.
- (g) One (1) agricultural equipment plasma cutting station, exhausted through Stack P-1, capacity: 15 cuts per hour at 0.001 pounds per cut.

- (h) One (1) spray paint booth, known as P-1, equipped with HVLP applicators and dry filters for particulate overspray control, exhausted through Stack P-2, capacity: 54 miscellaneous galvanized metal pieces per hour.
- (i) Eleven (11) molding machines, known as 17053 through 17063, installed in January 1980 - March 1995, and one (1) blow molder, known as 17052, installed in February 1994, exhausted through six (6) stacks, known as Stack E-8, worse case throughput total capacity: 604, 164, 669.6 and 120 pounds of polypropylene, polyvinyl chloride, acrylonitrile-butadiene-styrene and nylon per hour, respectively.
- (j) Three (3) silos, known as S-1, S-2 and S-3, total capacity: 65 tons, throughout capacity: 604 pounds of polypropylene per hour.
- (k) Four (4) natural gas-fired unit heaters, known as A, B, D, and F, rated at 0.300 million British thermal units per hour each.
- (l) One (1) natural gas-fired unit heater, known as C, rated at 0.320 million British thermal units per hour.
- (m) Five (5) natural gas-fired unit heaters, known as G, I, J, L, and S, rated at 0.125 million British thermal units per hour, each.
- (n) Six (6) natural gas-fired unit heaters, known as H, P, Q, T, U, and X, rated at 0.225 million British thermal units per hour, each.
- (p) Three (3) natural gas-fired unit heaters, known as K, R and V, rated at 0.175 million British thermal units per hour, each.
- (q) One (1) natural gas-fired unit heater, known as M, rated at 0.100 million British thermal units per hour.
- (r) One (1) natural gas-fired unit heater, known as N, rated at 0.160 million British thermal units per hour.
- (s) One (1) natural gas-fired unit heater, known as O, rated at 0.180 million British thermal units per hour.
- (t) One (1) natural gas-fired unit heater, known as W, rated at 0.250 million British thermal units per hour.
- (u) One (1) natural gas-fired hot water furnace, known as TT, rated at 0.232 million British thermal units per hour.
- (v) Four (4) natural gas-fired air make-up units, known as AMU-1 - AMU-4, rated 2.600 million British thermal units per hour, each.
- (v) One (1) natural gas-fired air make-up unit, known as AMU-5, rated at 1.650 million British thermal units per hour.
- (w) Four (4) natural gas-fired forced air furnaces, known as AA, MM, NN, and PP, rated at 0.100 million British thermal units per hour, each.
- (x) Five (5) natural gas-fired forced air furnaces, known as BB, DD, FF, GG, and HH, rated at 0.125 million British thermal units per hour, each.

- (y) Two (2) natural gas-fired forced air furnaces, known as CC and II, rated at 0.175 million British thermal units per hour, each.
- (z) One (1) natural gas-fired forced air furnace, known as EE, rated at 0.044 million British thermal units per hour.
- (aa) One (1) natural gas-fired forced air furnace, known as JJ, rated at 0.060 British thermal units per hour.
- (bb) One (1) natural gas-fired forced air furnace, known as KK, rated at 0.150 British thermal units per hour.
- (cc) One (1) natural gas-fired forced air furnace, known as LL, rated at 0.112 British thermal units per hour.
- (dd) One (1) natural gas-fired forced air furnace, known as OO, rated at 0.160 British thermal units per hour.
- (ee) One (1) electric air handler, known as QQ;
- (ff) One (1) natural gas-fired forced air furnace, known as RR, rated at 0.090 British thermal units per hour.
- (gg) One (1) natural gas-fired roof top unit, known as SS, rated at 0.203 British thermal units per hour.
- (hh) Five (5) natural gas-fired forced air furnaces, known as UU, VV, WW, XX, and YY, rated at 0.132 million British thermal units per hour, each;
- (ii) One (1) natural gas-fired forced air furnace, known as ZZ, rated at 0.046 British thermal units per hour.
- (jj) Four (4) natural gas-fired infrared heat tubes, known as Y1, Y2, Z1 and Z2, rated at 0.075 million British thermal units per hour, each.
- (kk) One (1) natural gas-fired water heater, rated at 0.030 British thermal units per hour.

**Brock Manufacturing**

- (ll) One (1) plasma cutting booth, installed in May 1990, exhausted through P1 and P2, capacity 15 cut per hour at 0.03 pounds per cut.
- (mm) Six (6) metal work stations, known as butt welding, auger welding, south weld booth, center weld booth, north weld booth, and portable, equipped with ten (10) electrostatic precipitators, installed in 1979 - 1993, one (1) portable electrostatic precipitator, installed in 1987.
- (nn) One (1) spot welding booth, installed in 1965 - 1979.
- (oo) One (1) solder booth, installed in 1984, equipped with an electrostatic precipitator, installed in 1979.
- (pp) One (1) natural gas-fired air make-up unit, known as AMU-1, rated at 1.925 British thermal units per hour.

- (qq) One (1) natural gas-fired air make-up unit, known as AMU-2, rated at 1.500 British thermal units per hour.
- (rr) Six (6) natural gas-fired air make-up units, known as AMU-3 - AMU-8, rated at 0.500 million British thermal units per hour, each.
- (ss) One (1) natural gas-fired air make-up unit, known as AMU-9, rated at 1.870 British thermal units per hour.
- (tt) One (1) natural gas-fired air make-up unit, known as AMU-10, rated at 1.900 British thermal units per hour.
- (uu) One (1) natural gas-fired water heater, rated at 0.320 British thermal units per hour.
- (vv) Nine (9) natural gas-fired unit heaters, known as A, C, F, G, H, P, W, X, and Z, rated at 0.250 million British thermal units per hour, each.
- (ww) Sixteen (16) natural gas-fired unit heaters, known as B, D, I, J, K, L, M, N, O, Q, R, S, T, U, V, and Y, rated at 0.400 million British thermal units per hour, each.
- (xx) One (1) natural gas-fired unit heater, known as E, rated at 0.230 British thermal units per hour.
- (yy) One (1) natural gas-fired unit heater, known as AA, rated at 0.200 British thermal units per hour.
- (zz) Two (2) natural gas-fired unit heaters, known as BB and CC, rated at 0.120 million British thermal units per hour, each.
- (aaa) Four (4) natural gas-fired roof top units, known as DD, EE, FF, and HH, rated at 0.150 British thermal units per hour, each.
- (bbb) One (1) natural gas-fired roof top unit, known as GG, rated at 0.100 British thermal units per hour.
- (ccc) One (1) natural gas-fired forced air furnace, known as II, rated at 0.080 British thermal units per hour.
- (ddd) Eleven (11) Metal Machines # 0274, # 0287, # 0323, # 0345, # 0348, # 0541, # 0542, # 0543, # 0544, # 257, and # 0348, each equipped with an electrostatic precipitator.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following:
  - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

2. Any change or modification which may increase the potential to emit a combination of HAPs, VOC, NO<sub>x</sub>, SO<sub>2</sub>, PM or PM<sub>10</sub> to twenty five (25) tons per year or a single HAP to ten (10) tons per year from this source shall require approval from IDEM, OAQ prior to making the change.
3. Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from the welding, plasma cutting, spray booth, molding, metal working, soldering and silo operations shall each be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Branch  
Office of Air Quality  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

MLK/MES

cc: File - Kosciusko County  
Kosciusko County Health Department  
Air Compliance - Doyle Houser  
Northern Regional Office  
Permit Filing - Lisa Lawrence  
Air Programs Section- Michele Boner  
Compliance Branch - Karen Nowak  
Office of Enforcement

<b>Registration Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

<b>Company Name:</b>	<b>CTB, Inc.</b>
<b>Address:</b>	<b>SR 15 North and Syracuse Road</b>
<b>City:</b>	<b>Milford, IN 45642</b>
<b>Authorized individual:</b>	<b>Chris Chocola</b>
<b>Phone #:</b>	<b>(219) 658-4191</b>
<b>Registration #:</b>	<b>R 085-4656-00054</b>

I hereby certify that this source is still in operation and is in compliance with the requirements of Registration R 085-4656-00054.

<b>Name (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

## **Indiana Department of Environmental Management Office of Air Quality**

### **Technical Support Document (TSD) for a Registration**

#### **Source Background and Description**

<b>Source Name:</b>	<b>CTB, Inc.</b>
<b>Source Location:</b>	<b>SR 15 North and Syracuse Road, Milford, IN 45642</b>
<b>County:</b>	<b>Kosciusko</b>
<b>SIC Code:</b>	<b>3523</b>
<b>Operation Permit No.:</b>	<b>R 085-4656-00054</b>
<b>Permit Reviewer:</b>	<b>Mark L. Kramer</b>

The Office of Air Quality (OAQ) has reviewed an application from CTB, Inc. relating to the construction and operation of animal feeding systems, PVC products and galvanized storage silo manufacturing source.

#### **Chore-Time Plant History**

The Chore-Time Plant produces animal feeding systems which include containers and devices for handling grain and water as well as manure conveyors. The manufacturing processes include plastic molding, spot welding of galvanized sheet steel, miscellaneous wire and stick welding as well as spray painting with aluminum paint on metal welds. The plastics area was constructed in 1984.

Chore-Time had two (2) spot welders since 1942. In the 1960s, Chore-Time added one (1) MIG welder and five (5) more spot welders. A twenty-five (25) ton cooling tower, one (1) auger mill, and one (1) additional spot welder were installed before 1974.

Between 1974 and 1980, Chore-Time added three (3) spot welders for a total of eleven (11) spot welders. Also during that time Chore-Time installed one (1) wire mill, and one (1) air cleaner.

After 1980, Chore-Time installed four (4) more auger mills, and an additional wire mill. Eleven (11) injection molders were installed after 1980. A plasma welder was added in 1980. In the 1990s, Chore-time also added two (2) more cooling towers, a granulator, and a blow molder, along with two (2) MIG welders and one (1) TIG welder.

#### **Brock Manufacturing Plant History**

The Brock Manufacturing Plant produces PVC fence rails, posts and pipes as well as galvanized grain storage silos. The PVC products were extruded in five (5) lines, four (4) of which are currently in operation with the fifth (5) line installed in September 1995.

IDEM was informed via correspondence on September 3, 1997 that the extruders located at CTB, Inc. have been sold to Royal Crown Limit, a wholly owned subsidiary of Royal Group Technologies Limited and were removed with the five (5) silos and associated sawing from the premises at CTB

prior to April 12, 1998. This correspondence also indicated that these machines would continue to operate on the CTB, Inc. property through December 1997 or January 1998. Royal Crown Limited was issued a construction permit, CP 085-9961-00080, on September 30, 1998 and it was modified by CP 085-10399, issued on March 26, 1999.

The production of the galvanized grain storage silos require various welding operations. The original plant was constructed in 1971 with additions in 1977, 1979 and 1991.

Prior to 1974, Brock installed one (1) MIG welder and two (2) spot welders. Between 1974 and 1980, Brock added three (3) additional spot welders and one (1) flash welder. Brock also installed an air cleaner and a smog hog. The remaining machines were installed after 1980.

In the 1980s, Brock installed three (3) more smog hogs, two (2) extruders, and a smoke out portable control device. Also during the 1980's, Brock added two (2) granulators, one (1) solder booth, and two (2) MIG welders. In the 1990s, Brock added a cooling tower, four (4) more extruders, one (1) additional granulator, a plasma cutter, and an additional MIG welder. In May of 1993, Brock installed four (4) smog hogs for a total of eight.

#### **Permitted Emission Units and Pollution Control Equipment**

There are no permitted facilities operating at this source during this review process.

#### **Unpermitted Emission Units and Pollution Control Equipment**

The source consists of the following unpermitted facilities/units:

##### **Chore-Time Equipment**

- (a) Three (3) fan cage spot welding booths, known as spot welder #1, #2 and #3, installed in 1941 - 1972, exhausted through Stack W-1, capacity 14 welds on 125 miscellaneous parts per hour.
- (b) Eight (8) miscellaneous galvanized parts spot welding booths, known as spot welder #1 - #8, installed in 1941 - 1979, exhausted through Stack W-2.
- (c) Four (4) miscellaneous parts metal inert gas welding booths, known as weld area #1 - #4, installed in 1961 - 1995, exhausted through Stacks W-3 and W-4, capacity: 2.8 pounds of wire per hour total.
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- (e) One (1) prototype engineering welding station, exhausted through Stack W-6.
- (f) Two (2) lab exhaust fans, exhausted through Stacks W-7 and W-8, respectively.
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- (h) One (1) spray paint booth, known as P-1, equipped with HVLP applicators and dry filters for particulate overspray control, exhausted through Stack P-2, capacity: 54 miscellaneous galvanized metal pieces per hour.

- (i) Eleven (11) molding machines, known as 17053 through 17063, installed in January 1980 - March 1995, and one (1) blow molder, known as 17052, installed in February 1994, exhausted through six (6) stacks, known as Stack E-8, worse case throughput total capacity: 604, 164, 669.6 and 120 pounds of polypropylene, polyvinyl chloride, acrylonitrile-butadiene-styrene and nylon per hour, respectively.
- (j) Three (3) silos, known as S-1, S-2 and S-3, total capacity: 65 tons, throughout capacity: 604 pounds of polypropylene per hour.
- (k) Four (4) natural gas-fired unit heaters, known as A, B, D, and F, rated at 0.300 million British thermal units per hour each.
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- (bb) One (1) natural gas-fired forced air furnace, known as KK, rated at 0.150 British thermal units per hour.
- (cc) One (1) natural gas-fired forced air furnace, known as LL, rated at 0.112 British thermal units per hour.
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- (ee) One (1) electric air handler, known as QQ;
- (ff) One (1) natural gas-fired forced air furnace, known as RR, rated at 0.090 British thermal units per hour.
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- (ii) One (1) natural gas-fired forced air furnace, known as ZZ, rated at 0.046 British thermal units per hour.
- (jj) Four (4) natural gas-fired infrared heat tubes, known as Y1, Y2, Z1 and Z2, rated at 0.075 million British thermal units per hour, each.
- (kk) One (1) natural gas-fired water heater, rated at 0.030 British thermal units per hour.

**Brock Manufacturing**

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- (nn) One (1) spot welding booth, installed in 1965 - 1979.
- (oo) One (1) solder booth, installed in 1984, equipped with an electrostatic precipitator, installed in 1979.
- (pp) One (1) natural gas-fired air make-up unit, known as AMU-1, rated at 1.925 British thermal units per hour.
- (qq) One (1) natural gas-fired air make-up unit, known as AMU-2, rated at 1.500 British thermal units per hour.

- (rr) Six (6) natural gas-fired air make-up units, known as AMU-3 - AMU-8, rated at 0.500 million British thermal units per hour, each.
- (ss) One (1) natural gas-fired air make-up unit, known as AMU-9, rated at 1.870 British thermal units per hour.
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- (bbb) One (1) natural gas-fired roof top unit, known as GG, rated at 0.100 British thermal units per hour.
- (ccc) One (1) natural gas-fired forced air furnace, known as II, rated at 0.080 British thermal units per hour.
- (ddd) Eleven (11) Metal Machines # 0274, # 0287, # 0323, # 0345, # 0348, # 0541, # 0542, # 0543, #0544, # 257, and # 0348, each equipped with an electrostatic precipitator.

#### **Emission Units and Pollution Control Equipment Removed From Service**

- (eee) Five (5) polyvinyl chloride extrusion lines, known as lines A - E, exhausted through one (1) ceiling fan and four (4) wall fans, removed in 1998.
- (fff) Five (5) silos, known as S1 through S5, equipped with a baghouse, storage capacity: 65 tons, throughput capacity 3,500 pounds per hour.
- (ggg) Five (5) cut-off saws equipped with point source vacuums with bag filtration.
- (hhh) One (1) PVC recycling process area, equipped with a baghouse.

#### **New Emission Units and Pollution Control Equipment**

There are no new facilities proposed at this source during this review process.

## Existing Approvals

The source has no previous approvals.

## Source Definition

This animal feeding systems, PVC products and galvanized storage silo manufacturing company consists of two (2) plants:

- (a) CTB, Inc. Chore-Time Equipment, is located at SR 15 North, Milford, IN 45642; and
- (b) CTB, Inc. Brock Manufacturing Plant is located at SR 15 North, Milford, IN 45642.

Since the two (2) plants are located on contiguous properties, have the same SIC codes and are owned by one (1) company, they will be considered one (1) source.

## Stack Summary

### Chore-Time

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
A	unit heater	23.1	0.84	n/a	n/a
B	unit heater	23.0	1.00	n/a	n/a
C	unit heater	22.8	0.50	n/a	n/a
D	unit heater	23.0	0.84	n/a	n/a
F	unit heater	21.3	0.84	n/a	n/a
G	unit heater	18.3	0.50	n/a	n/a
H	unit heater	14.9	0.67	n/a	n/a
I	unit heater	19.8	0.33	n/a	n/a
J	unit heater	21.3	0.33	n/a	n/a
K	unit heater	16.6	0.67	n/a	n/a
L	unit heater	16.9	0.67	n/a	n/a
M	unit heater	16.7	0.67	n/a	n/a
N	unit heater	25.3	0.67	n/a	n/a
O	unit heater	23.3	0.67	n/a	n/a
P	unit heater	28.3	0.42	n/a	n/a
Q	unit heater	19.0	0.42	n/a	n/a
R	unit heater	19.0	0.42	n/a	n/a
S	unit heater	18.3	0.33	n/a	n/a
T	unit heater	16.7	0.42	n/a	n/a
U	unit heater	19.8	0.42	n/a	n/a
V	unit heater	26.7	0.42	n/a	n/a
W	unit heater	23.3	0.33	n/a	n/a
X	unit heater	28.3	0.42	n/a	n/a
Y1/Y2	infrared heater	25.1	0.50	n/a	n/a

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
Z1/Z2	infrared heater	24.9	0.50	n/a	n/a
AMU-1	air make-up	8.8	n/a	30,000	n/a
AMU-2	air make-up	10.5	n/a	30,000	n/a
AMU-3	air make-up	9.0	n/a	30,000	n/a
AMU-4	air make-up	3.5	n/a	30,000	n/a
AMU-5	air make-up	n/a	n/a	14,000	n/a
EF-3	two (2) roof vent fans	20.1	4.50	14,000	n/a
E-8	six (6) vent fans	27.1	5.82	15,000	n/a
T1	cooling tower	26.7	3.00	n/a	n/a
T2	cooling tower	28.5	0.47	n/a	n/a
T3	cooling tower	24.8	3.00	n/a	n/a
W-1	spot welding	23.1	0.84	n/a	n/a
W-2	spot welding	22.3	0.5	n/a	n/a
W-3	MIG weld booth	9.3	n/a	2,375	n/a
W-4	MIG weld booth	9.3	n/a	2,375	n/a
W-5	weld booth	6.0	1.5	2,990	n/a
W-6	MIG weld booth	8.0	n/a	2,375	n/a
W-7 & W-8	ventilation fans	10.0	1.5	2,965	n/a
AA/BB	furnace	14.2	0.67	n/a	n/a
CC/DD	furnace	15.6	0.67	n/a	n/a
EE	furnace	14.4	0.67	n/a	n/a
FF/GG	furnace	15.0	0.67	n/a	n/a
HH	furnace	15.1	0.42	n/a	n/a
II	furnace	22.8	0.67	n/a	n/a
JJ	furnace	23.3	0.33	n/a	n/a
KK	furnace	25.6	0.67	n/a	n/a
LL	furnace	26.0	0.58	n/a	n/a
MM/NN	furnace	23.5	0.67	n/a	n/a
OO	furnace	21.8	0.5	n/a	n/a
PP	furnace	14.0	0.5	n/a	n/a
QQ	nat gas HVAC unit	n/a	n/a	n/a	n/a
RR	furnace	16.8	0.33	n/a	n/a
SS	nat gas HVAC unit	16.8	n/a	n/a	n/a
TT	hot water furnace	19.8	0.5	n/a	n/a
UU	furnace	17.3	0.42	n/a	n/a
VV	furnace	16.2	0.42	n/a	n/a
WW	furnace	17.1	0.42	n/a	n/a
XX	furnace	16.4	0.42	n/a	n/a
YY	furnace	14.3	0.42	n/a	n/a
ZZ	furnace	19.0	0.33	n/a	n/a
P-1	plasma cutter	7.5	n/a	n/a	n/a

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
P-2	paint booth	4.2	2	12,500	n/a
	power washer	8.8	0.33	n/a	n/a
	qc fume hood	10.8	0.5	n/a	n/a
	five (5) vent fans	26.2	2	5,000	n/a
	nine (9) vent fans	25.8	4.7	30,000	n/a
	vent fan	25.2	2.35	5,350	n/a
	four (4) ventilation fans	12.9	3	10,800	n/a
	six (6) ventilation fans	15.2	2	5,120	n/a
	ventilation fan	11.3	3	10,800	n/a
	four (4) ventilation fans	15.3	3	10,800	n/a
	ventilation fan	6.3	2	5,190	n/a
	four (4) vent fans	24.8	5.83	15,000	n/a
	three (3) ventilation fans	16.5	3	9,500	n/a

**Brock Manufacturing Plant**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
A	unit heater	25.4	0.67	n/a	n/a
B	unit heater	25.7	0.84	n/a	n/a
C	unit heater	24.9	0.67	n/a	n/a
D	unit heater	23.7	0.5	n/a	n/a
E	unit heater	23.8	0.33	n/a	n/a
F	unit heater	23.7	0.33	n/a	n/a
G	unit heater	25.0	0.33	n/a	n/a
H	unit heater	25.0	0.33	n/a	n/a
I	unit heater	23.3	0.5	n/a	n/a
J	unit heater	22.8	0.33	n/a	n/a
K	unit heater	22.8	0.33	n/a	n/a
L	unit heater	22.8	0.33	n/a	n/a
M	unit heater	29.5	0.33	n/a	n/a
N	unit heater	27.8	0.33	n/a	n/a
O	unit heater	28.1	0.33	n/a	n/a
P	unit heater	26.3	0.33	n/a	n/a
Q	unit heater	26.0	0.33	n/a	n/a
R	unit heater	26.0	0.33	n/a	n/a
S	unit heater	26.0	0.33	n/a	n/a
T	unit heater	28.1	0.33	n/a	n/a
U	unit heater	28.2	0.33	n/a	n/a
V	unit heater	26.4	0.33	n/a	n/a

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
W	unit heater	24.8	0.67	n/a	n/a
X	unit heater	25.3	0.67	n/a	n/a
Y	unit heater	25.0	0.84	n/a	n/a
Z	unit heater	24.4	0.33	n/a	n/a
AA	unit heater	23.3	0.33	n/a	n/a
BB	unit heater	23.9	0.33	n/a	n/a
CC	unit heater	23.9	0.33	n/a	n/a
DD	nat gas HVAC unit	16.3	n/a	n/a	n/a
EE	nat gas HVAC unit	16.4	n/a	n/a	n/a
FF	nat gas HVAC unit	16.4	n/a	n/a	n/a
GG	nat gas HVAC unit	16.4	n/a	n/a	n/a
HH	nat gas HVAC unit	16.3	n/a	n/a	n/a
II	furnace	23.2	0.50	n/a	n/a
AMU-1	air make-up unit	n/a	n/a	20,000	n/a
AMU-2	air make-up unit	2.1	n/a	15,000	n/a
AMU-3 - AMU-8	air make-up unit	17.0	3.39	4,800	n/a
AMU-9	air make-up unit	n/a	n/a	20,000	n/a
AMU-10	air make-up unit	n/a	n/a	20,000	n/a
EF-1	vent fan	27.3	3	13,900	n/a
EF-2	vent fan	23.7	1.5	3,000	n/a
EF-3	four (4) ventilation fans	16.0	3	9,700	n/a
P1	plasma cutting booth/esp air cleaner	n/a	n/a	2,000	n/a
P2	plasma cutting booth/esp air cleaner	n/a	n/a	2,000	n/a
T1	cooling tower	33.1	n/a	n/a	n/a
	static pressure sensor	22.0	0.04	n/a	n/a
	two (2) ventilation fans	17.2	3	10,800	n/a
	four (4) ventilation fans	16.0	3	10,800	n/a
	three (3) ventilation fans	17.0	2	5,300	n/a
	fifteen (15) ventilation fans	15.6	3	9,500	n/a
	three (3) ventilation fans	16.0	3	9,700	n/a
	eight (8) ventilation fans	18.0	3	9,700	n/a
	two (2) vent fans	27.3	2	2,000	n/a
	three (3) vent fans	27.3	3	13,900	n/a
	nat. gas water heater	22.9	0.33	n/a	n/a

### Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled *Unpermitted Emission Units and Pollution Control Equipment*.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

Applications for the purposes of this review were received on June 21, 1995 and October 4, 1995, with additional information received on July 28, 1995, June 20, July 5, August 16, 1996, March 31, April 8, July 29, September 3, 4, 5, 8, and November 10, 1997, April 16, 1998 as well as September 4, 2001.

### Emission Calculations

See pages 1 through 5 of 5 of Appendix A of this document for detailed emissions calculations of the natural gas combustion and the Chore-Time surface coating operations. The following additional calculations are provided by plant:

#### Chore-Time Equipment

- (a) Paint Booth

Potential emissions from the paint booth are calculated in the spreadsheet on pages 4 and 5 of 5 of Appendix A. The potential VOC emissions are 3.58 tons per year and 0.160 tons per year of PM.

- (b) Eleven (11) Plastic Molding Machines and One (1) Blow Molder

- (1) AP-42 Emission Factors for Polypropylene and Polyvinyl Chloride

The VOC emissions from the eleven (11) plastic molding machines and one (1) blow molder are as follows: The polypropylene and polyvinyl chloride throughputs are 604 and 164 pounds per hour, respectively, for molding. The emissions factors from AP-42, Section 6.6.4, Table 6.6.4-1 and Section 6.6.1, Table 6.6.1-1 are a VOC emission rates for polypropylene and polyvinyl chloride are 0.7 pounds per ton (0.035%) and 17 pounds per ton (0.85%), respectively. The throughputs of 604 and 164 pounds per hour combined with the aforementioned emission factors results in the potential VOC emission rates of 0.926 tons per year for polypropylene and 6.11 tons per year before controls or a subtotal of 7.04 tons per year.

(2) Applicant-Supplied VOC and PM Emission Factors For Polypropylene

The applicant supplied emission factor for polypropylene from the molding machines is 0.35 pounds per 1,000 pounds for VOC and 1.5 pounds per 1,000 pounds for PM<sub>10</sub>. Therefore, based on a material specific throughput of 604 pounds per hour, the potential VOC emissions are 0.211 pounds per hour or 0.926 tons per year for polypropylene and the potential PM<sub>10</sub> emissions are 0.906 pounds per hour or 3.97 tons per year.

(3) Applicant-Supplied VOC and PM Emission Factors For Polyvinyl Chloride

The applicant supplied emission factor for polyvinyl chloride from the molding machines is 8.5 pounds per 1,000 pounds for VOC and 17.5 pounds per 1,000 pounds for PM<sub>10</sub>. Therefore, based on a material specific throughput of 164 pounds per hour, the potential VOC/HAP emissions are 1.39 pounds per hour or 6.11 tons per year for polyvinyl chloride and the potential PM<sub>10</sub> emissions are 2.87 pounds per hour or 12.6 tons per year.

(4) Applicant-Supplied VOC and PM Emission Factors For Acrylonitrile-butadiene-styrene

The applicant supplied emission factor for acrylonitrile-butadiene-styrene from the molding machines is 3.0 pounds per 1,000 pounds for VOC and 1.39 pounds per 1,000 pounds for styrene. Therefore, based on a material specific throughput of 669.6 pounds per hour, the potential VOC emissions are 2.01 pounds per hour or 8.80 tons per year for acrylonitrile-butadiene-styrene and the potential HAP emissions are 0.931 pounds per hour or 4.08 tons per year.

(5) Applicant-Supplied VOC Emission Factor For Acetal

The Acetal throughput of 162 pounds per hour combined with an emission factor for formaldehyde of 0.00002 lbs pounds per pound of Acetal (Delrin) reported in Dupont's letter dated September 5, 1995 results in 0.014 tons of formaldehyde (VOC).

(6) Applicant-Supplied VOC Emission Factor For Nylon

The N<sub>2</sub>O emissions Nylon (ZYtel) usage based 120 pounds per hour and an emission factor of 3.1 pounds per 1,000 pounds of nylon equates to a potential VOC of 1.63 tons of VOC per year.

(c) Welding

The welding is performed in three (3) Metal Inert Gas (MIG) booths and in one (1) Tungsten Inert Gas (TIG) booth. In addition, plasma cutting is performed.

(1) Metal Inert Gas Welding

The particulate emissions from the metal inert welding operations are summarized as follows. Given that 73,584 pounds (3 stations at 2.8 pounds per hour per station for 8,760 hours per year) of welding wire usage per year and 1% converted to fumes converts to:

$73,584 \text{ pounds/yr} \times 1\% = 736 \text{ pounds/yr} = 0.368 \text{ TPY Potential PM Emissions}$

Emission factors submitted by the applicant indicates that 11.2% of the metal vaporized is Manganese (Mn). Therefore, Mn emissions =  $0.368 \text{ TPY} \times 0.112 = 0.041 \text{ TPY}$ .

(2) Tungsten Inert Gas Welding

The particulate emissions from the metal inert welding operations are summarized as follows. Given that 9,636 pounds (1 stations at 1.1 pounds per hour per station for 8,760 hours per year) of welding wire usage per year and 1% converted to fumes converts to:

$9,636 \text{ pounds/yr} \times 1\% = 96.4 \text{ pounds/yr} = 0.048 \text{ TPY Potential PM Emissions}$

(3) Plasma Cutting

The particulate emissions from plasma cutting are summarized as follows. Assuming a maximum cut-out rate of 1 cut/hr of 0.030 pounds cut = 0.030 lbs/hr of PM. The resulting PM emissions are:

$0.030 \text{ pounds/hr} \times 8,760 \text{ hours/year} = 263 \text{ lbs/yr}$  or 0.131 TPY Potential PM Emissions

(4) Plasma Welder

The plasma welder according to the application emits 0.30 oz/hr of galvanized plastic. Thus,  $0.30 \text{ oz/hr} \times 1 \text{ lb}/16 \text{ oz} \times 8,760 \text{ hours/year} = 164 \text{ lbs/yr} = 0.082 \text{ TPY}$  of PM

(d) Storage Silos

The potential to emit PM and  $\text{PM}_{10}$  from the three (3) silos, known as S-1, S-2 and S-3, with a total capacity of 65 tons and a throughout capacity of 604 pounds of polypropylene per hour is negligible.

**Brock Manufacturing Plant**

The welding is performed in the South, Center and North Weld Booths as well as Butt, Auger and portable welding in the facility. All welding is controlled by particulate matter control devices. All particulate devices exhaust their discharge within the facility. In addition, plasma cutting is performed and particulate matter is controlled by bag filters.

(a) Metal Inert Gas Welding

The particulate emissions from the metal inert welding operations are summarized as follows. Given that 65,700 pounds (5 stations at 1.5 pounds per hour per station for 8,760 hours per year) of welding wire usage per year and 1% converted to fumes converts to:

$65,700 \text{ pounds/yr} \times 1\% = 657 \text{ pounds/yr} = 0.329 \text{ TPY Potential PM Emissions}$

Emission factors submitted by the applicant indicates that 11.2% of the metal vaporized is Manganese (Mn). Therefore, Mn emissions =  $0.329 \text{ TPY} \times 0.112 = 0.037 \text{ TPY}$ .

The particulate matter control devices all have an efficiency of 90%. The potential PM emissions after controls is  $0.10 \times 0.329 \text{ TPY} = 0.033 \text{ TPY}$ , and Mn emissions after controls are 0.004 TPY.

(b) Plasma Cutting

The particulate emissions from plasma cutting are summarized as follows. Assuming a maximum cut-out rate of 15 cuts/hr of 0.030 pounds cut = 0.45 lbs/hr of PM. The resulting PM emissions are:

$$0.45 \text{ pounds/hr} \times 8,760 \text{ hours/year} = 3,942 \text{ lbs/yr or } 1.97 \text{ TPY Potential PM Emissions}$$

The plasma cut-out process is equipped with filters that have a 50% control efficiency. Therefore, PM after controls equals  $0.50 \times 1.97 \text{ TPY} = 0.986 \text{ TPY}$ .

(c) Soldering

Based on a maximum consumption of 7.5 pounds of solder per hour and 1% vaporized equates 0.075 pounds of PM per hour or 0.329 tons per year before control. With a 90% control, the potential PM emissions are 0.033 tons per year of PM.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	20.3
PM <sub>10</sub>	21.3
SO <sub>2</sub>	0.107
VOC	22.0
CO	15.0
NO <sub>x</sub>	17.9

  

HAPs	Potential To Emit (tons/year)
TOTAL	Single less than 10 Combination 12.7

- (a) The potential to emit (as defined in 326 IAC 2-5.1-2) of PM, PM<sub>10</sub>, CO, VOC and NO<sub>x</sub> are less than twenty-five (25) tons per year and PM is greater than five (5) tons per year and VOC and NO<sub>x</sub> are greater than ten (10) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2.

(b) Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

**Actual Emissions**

No previous emission data has been received from the source.

**Limited Potential to Emit**

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	<b>Limited Potential to Emit</b> (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Surface Coating	0.026	0.026	-	3.58	-	-	2.10
Plastic Molding	16.6	16.6	-	17.5	-	-	10.2
Combustion	0.340	1.36	0.107	0.984	15.0	17.9	0.338
Welding, Cutting, Soldering	1.68	1.68	-	-	-	-	0.045
Total Emissions	18.6	19.6	0.107	22.0	15.0	17.9	12.7

**County Attainment Status**

The source is located in Kosciusko County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Kosciusko County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2

and 40 CFR 52.21.

- (b) Kosciusko County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

#### **Part 70 Permit Determination**

##### **326 IAC 2-7 (Part 70 Permit Program)**

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than one hundred (100) tons per year,
- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) any combination of HAPs is less than twenty-five (25) tons/year.

This is the first air approval issued to this source.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

#### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-6 (Emission Reporting)**

This source is located in Kosciusko County and the potential to emit PM<sub>10</sub>, VOC and NO<sub>x</sub> is less than one hundred (100) tons per year, therefore, 326 IAC 2-6 does not apply.

##### **326 IAC 5-1 (Opacity Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

### **State Rule Applicability - Individual Facilities**

#### **326 IAC 8-2-9 (Miscellaneous Metal Coating)**

Since the spray booth at Chore-Time was constructed prior to July 1, 1990 and the potential to emit volatile organic compounds is less than twenty-five (25) tons per year, the spray booth is not subject to the requirements of 326 IAC 8-2-9.

#### **326 IAC 6-3-2 (Process Operations)**

Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) from the welding, plasma cutting, spray booth, molding, metal working, soldering and silo operations shall each be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.

Since the equivalent of 0.551 pounds per hour is 2.41 tons per year and the potential to emit PM before controls for each of these families as shown on page 5 of 5 of the Appendix A is considerably less than 2.41 tons per year of PM, the control devices do not have to operate at all times to comply with the requirements of 326 IAC 6-3-2.

### **Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Quality (OAQ) Construction Permit Application Form Y.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.
- (b) See attached calculations for detailed air toxic calculations in this document under Emission Calculations and in Appendix A on pages 2 and 5 of 5.

### **Conclusion**

The operation of this animal feeding systems, PVC products and galvanized storage silo manufacturing source shall be subject to the conditions of the attached proposed Registration R 085-4656-00054.

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Small Industrial Boiler**

**Page 1 of 5 TSD App A**

**Company Name: CTB, Inc.  
Address City IN Zip: SR 15 North and Syracuse Road, Milford, Indiana 45642  
Registration: R 085-4656  
Plt ID: 085-00054  
Reviewer: Mark L. Kramer  
Date: June 21, 1995**

**Chore-Time MMBtu/hr 20.222  
Brock 20.615**

**For unit rating see page 3**

**Total CTB**

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

**40.837**

**357.73**

Pollutant						
Emission Factor in lb/MMCF	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
	**see below					
Potential Emission in tons/yr	0.340	1.36	0.107	17.9	0.984	15.0

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only**

**MM BTU/HR <100**

**Small Industrial Boiler**

**HAPs Emissions**

**Company Name: CTB, Inc.**

**Address City IN Zip: SR 15 North and Syracuse Road, Milford, Indiana 45642**

**Registration: R 085-4656**

**Plt ID: 085-00054**

**Reviewer: Mark L. Kramer**

**Date: June 21, 1995**

**HAPs - Organics**

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.756E-04	2.146E-04	1.341E-02	3.220E-01	6.081E-04

**HAPs - Metals**

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	8.943E-05	1.968E-04	2.504E-04	6.797E-05	3.756E-04	0.338

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Address City IN Zip: SR 15 North and Syracuse Road, Milford, Indiana 45642  
 Registration: R 085-4656  
 Plt ID: 085-00054  
 Reviewer: Mark L. Kramer  
 Date: June 21, 1995

Unit ID.	Chore-Time mmbtu/hr	Unit ID.	Brock mmbtu/hr
A	0.300	A	0.250
B	0.300	B	0.400
C	0.320	C	0.250
D	0.300	D	0.400
F	0.300	E	0.230
G	0.125	F	0.250
H	0.225	G	0.250
I	0.125	H	0.250
J	0.125	I	0.400
K	0.175	J	0.400
L	0.125	K	0.400
M	0.100	L	0.400
N	0.160	M	0.400
O	0.180	N	0.400
P	0.225	O	0.400
Q	0.225	P	0.250
R	0.175	Q	0.400
S	0.125	R	0.400
T	0.225	S	0.400
U	0.225	T	0.400
V	0.175	U	0.400
W	0.250	V	0.400
X	0.225	W	0.250
AA	0.100	X	0.250
BB	0.125	Y	0.400
CC	0.175	Z	0.250
DD	0.125	AA	0.200
EE	0.044	BB	0.120
FF	0.125	CC	0.120
GG	0.125	DD	0.150
HH	0.125	EE	0.150
II	0.175	FF	0.150
JJ	0.060	GG	0.100
KK	0.150	HH	0.150
LL	0.112	II	0.080
MM	0.100	AMU-1	1.925
NN	0.100	AMU-2	1.500
OO	0.160	AMU-3	0.500
PP	0.100	AMU-4	0.500
QQ	0.000	AMU-5	0.500
RR	0.090	AMU-6	0.500
SS	0.203	AMU-7	0.500
TT	0.232	AMU-8	0.500
UU	0.132	AMU-9	1.870
VV	0.132	AMU-10	1.900
WW	0.132	WATER	0.320
XX	0.132	<b>Total</b>	<b>20.615</b>
YY	0.132		
ZZ	0.046		
Y1	0.075		
Y2	0.075		
Z1	0.075		
Z2	0.075		
WATER	0.030		
AMU-1	2.600		
AMU-2	2.600		
AMU-3	2.600		
AMU-4	2.600		
AMU-5	1.650		
<b>Total</b>	<b>20.222</b>		

**Appendix A: State Potential Emissions Calculations**  
**VOC and Particulate**  
**From Surface Coating Operations**

**Company Name:** CTB, Inc.  
**Plant Location:** SR 15 North and Syracuse Road, Milford, Indiana 45642  
**Registration:** R 085-4656  
**Plt ID:** 085-00054  
**Reviewer:** Mark L. Kramer  
**Date:** June 21, 1995

Material	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential tons per year	lb VOC /gal solids	Transfer Efficiency		
Chore-Time Equipment																		
B. Moore	7.6	69.40%	0.0%	69.4%	0.0%	31.70%	0.00119	54.000	5.27	5.27	0.34	8.13	1.48	0.16	16.64	75%		
Xylene	7.2	100.00%	0.0%	100.0%	0.0%	0.00%	0.00123	54.000	7.20	7.20	0.48	11.48	2.09	0.00	N/A	75%		
State Potential Emissions											TOTAL:							
											PM Control Eff			84.00%				
											TOTAL After Controls:			0.82	19.61	3.58	0.16	
														0.82	19.61	3.58	0.026	

## HAP Emission Calculations

Company Name: CTB, Inc.  
 Plant Location: SR 15 North & Syracuse Road, Milford, Indiana 45642  
 Registration: R 085-4656  
 Plt ID: 085-00054  
 County: Kosciusko  
 Permit Reviewer: Mark L. Kramer  
 Date: June 21, 1995

Material	Density (lbs/gal)	Gal of Mat (gal/unit)	Maximum (units/hour)	Weight % Xylene	Weight % Ethyl benzene				Xylene Emissions (tons/yr)	Ethyl benzene Emissions (tons/yr)		
<b>Chore-Time Equipment</b>												
B. Moore	7.6	0.001190	54.00	0.00%	0.00%				0.00	0.00		
Xylene (mixture)	7.2	0.001230	54.00	80.00%	20.00%				1.68	0.42		
Total State Potential Emissions								<b>TOTALS:</b>	<b>(tons/yr):</b>	<b>1.676</b>	<b>0.419</b>	
									<b>(lbs/hr):</b>	<b>0.383</b>	<b>0.096</b>	
									<b>(g/sec):</b>	<b>0.048</b>	<b>0.012</b>	

## METHODOLOGY

HAPs emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

## Summary of Emission Calculations in Appendix and TSD (tons/year)

## Facilities

	PM	PM10	SO2	NOx	VOC	CO	HAPs
CTB Natural Gas Combustion	0.340	1.360	0.107	17.900	0.984	15.000	0.338
<b>Chore-Time</b>							
Surface Coating	0.160	0.160	0.000	0.000	3.580	0.000	2.095
Surface Coating After Controls	0.026	0.026	0.000	0.000	3.580	0.000	2.095
Plastic Molding Applicant							
Polypropylene	3.970	3.970	0.000	0.000	0.926	0.000	0.000
Poly Vinyl Chloride	12.600	12.600	0.000	0.000	6.110	0.000	6.110
Acrylonitrile-butadiene-styrene	0.000	0.000	0.000	0.000	8.800	0.000	4.080
Acetal	0.000	0.000	0.000	0.000	0.014	0.000	0.014
Nylon	0.000	0.000	0.000	0.000	1.630	0.000	0.000
Welding							
MIG	0.368	0.368	0.000	0.000	0.000	0.000	0.041
TIG	0.048	0.048	0.000	0.000	0.000	0.000	0.000
Plasma Cutting	0.131	0.131	0.000	0.000	0.000	0.000	0.000
Plasma Welder	0.082	0.082	0.000	0.000	0.000	0.000	0.000
<b>Brock</b>							
MIG Welding (before controls)	0.329	0.329	0.000	0.000	0.000	0.000	0.037
MIG Welding (after controls)	0.033	0.033	0.000	0.000	0.000	0.000	0.004
Plasma Cutting (before controls)	1.97	1.97	0.000	0.000	0.000	0.000	0.000
Plasma Cutting (after controls)	0.986	0.986	0.000	0.000	0.000	0.000	0.000
Soldering (before controls)	0.329	0.329	0.000	0.000	0.000	0.000	0.000
Soldering (after controls)	0.033	0.033	0.000	0.000	0.000	0.000	0.000
Total PTE Before Controls	20.327	21.347	0.107	17.9	22.044	15	12.715
Total PTE After Controls	18.617	19.637	0.107	17.9	22.044	15	12.682

Single HAP less than 10 TPY